AMENDMENTS TO THE CLAIMS:

For the convenience of the Examiner, all claims have been presented, whether or not an amendment has been made. The claims have been amended as follows:

Claims 1-39 **(Canceled)**

40. **(Currently Amended)** A medical implant, comprising:

a headless body configured to fit snugly into a sinus tarsi of a subtalar joint in a human foot, the body comprising:

a first end having a first diameter;

a second end having a second diameter;

at least one continuous and uninterrupted thread including a crest with a substantially flat surface and having a substantially constant thread height and helically traversing a length of an exterior surface of the body, the length spanning from the first end to the second end;

a recessed engagement in the first end; and wherein:

a circumference of the exterior surface tapers from the first diameter to the second diameter along the length of the body; and~~.~~

the thread includes a leading flank spanning from the crest to a thread root and a trailing flank spanning from the crest to the thread root, the leading flank separated from the trailing flank by a narrowing clearance therebetween.

41. **(Currently Amended)** The medical implant of Claim 40 ~~41~~, wherein:

the circumference of the exterior surface tapers uniformly from the first end to the second end according to a predetermined taper angle; ~~and~~

the leading flank and the trailing flank define a constant thread angle therebetween; and

the direction of incline of the ~~thread includes a~~ leading flank is ~~inclined away from the second end and spanning from the crest to a thread root and a~~ opposite the direction of incline of the trailing flank. ~~inclined away from the first end and spanning from the crest to the thread root, the leading flank and the trailing flank defining a thread angle.~~

42. **(Previously Presented)** The medical implant of Claim 41, wherein the recessed engagement comprises:

a hexagonal portion;

a cylindrical portion; and

a countersink portion.

43. **(Previously Presented)** The medical implant of Claim 41, wherein the taper angle measures between 15 degrees and 20 degrees.

44. **(Currently Amended)** A medical implant, comprising:

a body adapted for implantation into a sinus tarsi of a subtalar joint in a human foot, the body comprising:

a first end having a first diameter;

a second end having a second diameter;

at least one continuous and uninterrupted thread including a crest with a substantially flat surface and having a substantially constant thread height and helically traversing a length of an exterior surface of the body, the length spanning from the first end to the second end; and

a recessed engagement in the first end,~~; and wherein:~~ the recessed engagement comprising: ~~comprises:~~

a hexagonal portion;

a cylindrical portion;

a countersink portion; and wherein:

a circumference of the exterior surface tapers from the first diameter to the second diameter along the length of the body; ~~wherein~~

the taper angle is configured to minimize pressure points between the body and a talus bone and the body and a calcaneus bone when the body is implanted into the sinus tarsi; and

the thread includes a leading flank spanning from the crest to a thread root and a trailing flank spanning from the crest to the thread root, the leading flank separated from the trailing flank by a narrowing clearance therebetween.

45. **(Canceled)**

46. **(Previously Presented)** The medical implant of Claim 41, wherein:
the at least one thread has a substantially constant pitch;
the at least one thread further includes a crest width;
the ratio of the crest width to the thread height is at least 0.3;
the thread angle measures approximately 60 degrees; and further comprising:
a thread root width measuring between 0.020 inches and 0.040 inches.

47. **(Previously Presented)** The medical implant of Claim 41, wherein:
the first end comprises a first flat face encircling the recessed engagement; and
the second end comprises a second flat face encircling a bore.

48. **(Previously Presented)** The medical implant of Claim 41, wherein the at least one thread further includes a crest width and a substantially constant pitch, wherein the ratio of the crest width to the pitch is between 0.25 and 0.4.

49. **(Previously Presented)** The medical implant of Claim 41, wherein the at least one thread further includes a thread root width measuring between 0.020 inches and 0.040 inches.

50. **(Previously Presented)** The medical implant of Claim 41, wherein:
the body is generally conical; and
the circumference of the exterior surface comprises the crest of the thread.

51. **(Previously Presented)** The medical implant of Claim 41, wherein:
the taper angle measures approximately 18 degrees;
the thread height is approximately 0.032 inches;
a root width of the thread is approximately 0.030 inches; and
a pitch of the thread is approximately 0.090 inches.

52. **(Previously Presented)** The medical implant of Claim 41, wherein:

the thread is configured to secure the body into the sinus tarsi, and to limit pain caused to a patient by the thread once the medical implant is inserted into the sinus tarsi;

the body is configured to:

reduce calcaneal eversion;

at least partially prevent displacement of a talus without penetrating bone; and

limit pain caused by localized pressure points between the body and one or more surrounding bones once the medical implant is inserted into the sinus tarsi.

53. **(Previously Presented)** The medical implant of Claim 41, wherein:

the entirety of the medical device is adapted for insertion into the sinus tarsi and, once inserted is operable to minimize pressure points between the body and a talus bone and the body and a calcaneus bone when the medical device is implanted into the sinus tarsi.

54. **(Previously Presented)** The medical implant of Claim 41, further comprising a bore coaxial with the recessed engagement and extending from the recessed engagement to the second end.

55. **(Currently Amended)** A method of forming a medical implant, comprising:

configuring a headless body to fit snugly into a sinus tarsi of a subtalar joint in a human foot, the body comprising:

a first end having a first diameter;

a second end having a second diameter;

forming at least one continuous and uninterrupted thread including a crest with a substantially flat surface and having a substantially constant thread height and helically traversing a length of an exterior surface of the body, the length spanning from the first end to the second end;

forming a recessed engagement in the first end; and wherein:

a circumference of the exterior surface tapers from the first diameter to the second diameter along the length of the body; and.

the thread includes a leading flank spanning from the crest to a thread root and a trailing flank spanning from the crest to the thread root, the leading flank separated from the trailing flank by a narrowing clearance therebetween.

56. **(Currently Amended)** The method of Claim 55, wherein:

the circumference of the exterior surface tapers uniformly from the first end to the second end according to a predetermined taper angle; and

the leading flank and the trailing flank define a constant thread angle therebetween; and

the direction of incline of the ~~thread includes a~~ leading flank is ~~inclined away from the second end and spanning from the crest to a thread root and a~~ opposite the direction of incline of the trailing flank. ~~inclined away from the first end and spanning from the crest to the thread root, the leading flank and the trailing flank defining a thread angle.~~

57. **(Previously Presented)** The method of Claim 56, wherein the recessed engagement comprises:

a hexagonal portion;

a cylindrical portion; and

a countersink portion.

Claims 58 - 61 **(Canceled)**

62. **(Previously Presented)** The method of Claim 56, wherein:

the first end comprises:

a first flat face; and

the second end comprises a second flat face.

63. **(Previously Presented)** The method of Claim 56, further comprising forming a bore coaxial with the recessed engagement and extending from the recessed engagement to the second end.

64. **(Canceled)**

65. **(Previously Presented)** The method of Claim 56, wherein the at least one thread further includes:

the thread angle measuring approximately 60 degrees;

a crest width, wherein the ratio of the crest width to the thread height is at least 0.3; and

a thread root width measuring between 0.020 inches and 0.040 inches.

66. **(Previously Presented)** The method of Claim 56, wherein:

the body is generally conical; and

the circumference of the exterior surface comprises the crest of the thread.

67. **(Currently Amended)** A method, comprising:

inserting into the sinus tarsi:

a body configured to fit snugly into a sinus tarsi of a subtalar joint in a human foot, the body comprising:

a first end having a first diameter;

a second end having a second diameter;

a recessed engagement in the first end;

a bore coaxial with the recessed engagement and extending from the recessed engagement to the second end;

at least one continuous and uninterrupted thread including:

a crest with a substantially flat surface and having a substantially constant thread height and helically traversing a ~~portion of the~~ length of an exterior surface of the body, the length spanning from the first end to the second end; and

a leading flank inclined away from the second end and spanning from the crest to a thread root and a trailing flank inclined away from the first end and spanning from the crest to the thread root, the leading flank and the trailing flank defining a thread angle; and wherein

a circumference of the exterior surface tapers from the first diameter to the second diameter along the length of the body; and

the thread is configured to secure the body into the sinus tarsi, and to limit pain caused to a patient by the thread once the body is inserted into the sinus tarsi.

68. **(Previously Presented)** The method of Claim 67, wherein:

the circumference of the exterior surface tapers uniformly from the first end to the second end according to a first taper angle; the first taper angle defined by a second taper angle of the sinus tarsi of the second human foot.

69. **(Previously Presented)** The method of Claim 67, wherein the entirety of the medical device is inserted into the sinus tarsi.

70. **(Currently Amended)** A medical implant, comprising:

a body configured to fit snugly into a sinus tarsi of a subtalar joint in a human foot, the body comprising:

a first end having a first diameter;

a second end having a second diameter;

a recessed engagement in the first end;

a bore coaxial with the recessed engagement and extending from the recessed engagement to the second end;

at least one continuous and uninterrupted thread including:

a crest with a substantially flat surface and having a substantially constant thread height and helically traversing a ~~portion of the~~ length of an exterior surface of the body, the length spanning from the first end to the second end; and

a leading flank spanning from the crest to a thread root and a trailing flank spanning from the crest to the thread root, the leading flank separated from the trailing flank by a narrowing clearance therebetween ~~a leading flank inclined away from the second end and spanning from the crest to a thread root and a trailing flank inclined away from the first end and spanning from the crest to the thread root~~, the leading flank and the trailing flank defining a thread angle; and wherein

a circumference of the exterior surface tapers from the first diameter to the second diameter along the length of the body; and

the thread is configured to secure the body into the sinus tarsi, and to minimize pain caused to a patient by the thread once the body is inserted into the sinus tarsi.

71. **(New)** The medical implant of Claim 70, wherein the body is unperforated along its length.

72 **(New)** The medical implant of Claim 41, wherein the direction of incline of the leading flank is equal and opposite to the direction of incline of the trailing flank.